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## Chad

*With its large undeveloped oil reserves, Chad has the potential to become a significant energy producer. Construction is currently underway on a 650-mile pipeline which will allow Chad to export 225,000 barrels per day of crude by the middle of the decade.*

*Note: Information contained in this report is the best available as of April 2001 and can change.*



### GENERAL BACKGROUND

With an annual per capita income of \$230, Chad is one of the poorest countries in the world and is ranked 167th out of 174 countries on the United Nations' human development index. Chad's economy is currently dominated by the agricultural sector. Cotton, the major cash crop, accounted for 59% of Chad's exports in 1998. However, cotton made up only 36% of exports in 1999 due to a sharp decline in world cotton prices. The slowdown in the cotton sector led to a 0.7% drop in real GDP in 1999 and an 8.4% fall in consumer prices. In 2000, Chad's economy rebounded, posting a real GDP growth rate of 3% accompanied by a 3% rise in

consumer prices. In January 2000, the [IMF approved a three-year arrangement](#) for Chad under the Poverty Reduction and Growth Facility (PRGF) equivalent to \$49.9 million to support Chad's 1999/2002 economic program. The Doba oil project, for which construction recently began following World Bank approval, may transform Chad's economy. In addition to roughly doubling the government's annual budget, the project is expected to double Chad's GDP by 2004.

Chad is one of six members of the [Central African Economic and Monetary Union \(CAEMU\)](#). The sub-regional group made up of Chad, Cameroon, the Central African Republic, the Republic of the Congo, Gabon, and Equatorial Guinea, was created in 1991. CAEMU's objectives include economic and political cooperation and eventual integration within the sub-region.

Chad is rich in natural and mineral resources. Currently, only deposits of natron (sodium carbonate) and kaolin are utilized commercially. Deposits of other minerals have been discovered in Chad, including gold, bauxite, tin, tungsten, titanium, iron ore, and petroleum. Although Chad possesses substantial proven oil reserves, it currently is unable to produce or refine any of its own oil, and is thus totally dependent on fuel

imports, mainly from Nigeria and Cameroon.

A former a province of French Equatorial Africa, Chad achieved its independence from France in 1960. Idriss Deby assumed state control in 1990. In April 1993, a National Conference, composed of Deby's political party and members of several opposition political groups, created a transitional government, with Deby remaining as head of state, adopted a transitional charter, and formulated a timetable for national elections. A new constitution was adopted by a national referendum in March 1996. The constitution calls for the establishment of a bicameral legislature (National Assembly) and the election of the president by direct universal suffrage. The president can serve a maximum of two five-year terms in office. Deby was elected president in 1996, receiving 69% of the vote. Since October 1998, the government has been engaged in an armed conflict with rebels in the north of the country.

## **OIL**

Petroleum exploration in Chad began in the early 1970's. Several discoveries were made, including the Sedigi, Kanem and Kumia fields in the Lake Chad basin, and the Doba basin's Miandoun and Kome fields located in southern Chad. A consortium of foreign oil firms, which included Chevron, Conoco, Exxon Mobile, and Shell, discovered the fields. The outbreak of civil war in 1979 led to the suspension of exploration activities, as well as a proposed plan to build a pipeline from the Lake Chad basin fields to a new refinery in the capital of N'Djamena. Conoco, the consortium operator, withdrew from Chad in 1981, and Exxon assumed operations. Exxon resumed exploration activities with concentration in the Doba region, and discovered the Bolobo field in 1989. Chevron sold its stake in the consortium to France's Elf Aquitaine (now TotalFina Elf) in 1993.

In November 1996, the consortium, then consisting of Exxon Mobile (40% and operator), Shell (40%) and Elf Aquitaine (20%), signed a memorandum of understanding (MOU) with the government of Chad. The MOU provides the terms of the development of the Doba basin fields, and the construction of a 1,050-kilometer (650-mile) export pipeline through Cameroon to offshore export facilities located near Kribi. The total cost of field development and construction of the pipeline and export facilities is estimated to be \$3.5 billion. In April 2000, U.S.-based Chevron and Malaysia's Petronas joined the consortium, replacing TotalFina Elf and Shell, who had divested their combined 60% share in the consortium. Petronas acquired a 35% interest, with Chevron taking the remaining 25%. ExxonMobil retained its controlling 40% share in the consortium.

[The Chad-Cameroon pipeline project](#) consists of two primary components, development of the oil fields and construction of the pipeline and export facilities. The Doba basin's three fields (Bolobo, Kome and Miandoun) is expected to produce 900 million - 1 billion barrels of low sulfur oil over the life of the project. The consortium plans to drill 300 wells. Production is forecast to continue for 25-30 years, with peak production projected at 225,000 to 250,000 barrels per day (bbl/d). Crude oil from the three fields will be gathered, treated and blended at a facility located on the Kome field. Construction of the project began in October 2000. Production is set to begin as early as 2003, with cost of field development estimated at be \$1.5 billion.

Construction of the pipeline and export facilities is expected to last two years and to cost \$2.2 billion. The Chadian portion of the pipeline, approximately 170-kilometers (105 miles) long, and the first (located at Kome) of the three pumping stations will be built and owned by the Tchad Oil Transport Company (TOTCO). TOTCO, which was established in July 1998, is composed of members of the consortium and the government of Chad. The Cameroon Oil Transport Company (COTCO), will build and own the 880-kilometer (545-mile) Cameroonian section of the pipeline, including the remaining pumping stations and the export facilities. The export facilities will consist of an onshore pressure-reducing station near Kribi, a 12-kilometer (7-mile) sub-sea pipeline and an offshore floating storage and off-loading facility (FSO). COTCO consists of the consortium members, the Cameroonian government, and the government of Chad. Deviations in the pipeline route may extend the total distance up to 663 miles.



The foreign consortium's share in bankrolling the project will amount to \$2.2 billion (59.2% of total costs), while commercial banks and export credit agencies will contribute \$600 million (16.1%) and capital markets will finance \$400 million (10.7%). The lynchpin of the project financing, however, is [the World Bank loan of \\$93 million](#) -- \$53.4 million for Cameroon and \$39.5 million for Chad -- agreed to in June 2000. In addition, the International Finance Corporation will lend the three companies \$100 million and make another \$300 million available through commercial banks. Finally, the European Investment Bank may also contribute \$40 million to the project. A week after the World Bank's board "overwhelmingly" approved the project, the U.S. Export-Import Bank approved a \$300-million loan guarantee to finance exports to build the pipeline.

According to projections released by the World Bank, the Doba project is highly profitable. Based on a benchmark price of \$15.25 per barrel of oil, total receipts for the Doba project are expected to reach \$12 billion over a 28-year period. Net revenue would amount to \$9.2 billion before debt servicing. Chad would earn \$2.5 billion over the life of the project with annual revenues of up to \$200 million.

The Chad-Cameroon oil project has been the source of intense opposition from human rights and environmental groups. In July 1998, nearly ninety local, national and international non-governmental organizations (NGOs) submitted a petition to the World Bank to shelve plans for the pipeline project, and in September 1999 the NGOs called for a 2-year moratorium on the project. Similar petitions and lobbying efforts continued through 2000. Many of the environmental concerns have focused on Cameroon, where the pipeline is set to traverse areas of dense jungle inhabited by the Bagyeli ethnic group, or Pygmies as they are popularly known. Consequently, the consortium has made numerous adjustments to the route of the pipeline, which will run entirely underground. Concerning Chad, human rights groups are fearful that revenue from oil exports will not go towards needed social programs but instead be used to finance the on-going civil war. Several NGOs have accused the Chadian government and military of human rights abuses.

In response to many concerns over the project, the World Bank imposed several requirements as prerequisites to the loan's approval, including: a credible oil revenue management program; extragovernmental participation (including opposition parties and the private sector) in decisions concerning the use of oil revenues; government commitments to target revenue expenditures on education, health and infrastructure; resettlement of the handful of people displaced by the project; and consultation with residents and others affected by the project. An International Advisory Group, whose members were appointed by the World Bank in February 2001, will monitor the project. The oversight body is comprised of independent international experts who will be responsible for identifying potential problems in the use of public revenues, the adequacy of civil society participation, as well as environmental management and social impacts. The Group's findings will be made public following a review by senior World Bank officials.

In December 1998, Chad's Parliament approved a law that set out the Government's poverty reduction objectives and detailed arrangements for the use of the oil revenues. Under the law, 10% of the royalties and revenues are to be held in trust for future generations, 80% of the remaining funds are to be devoted to education, health and social services and rural development, and 5% are to be earmarked for regional development in the oil-producing area. However, in November 2000, reports surfaced indicating that the Chadian government had spent \$4 million of oil-related money on arms to fight the civil war. The money was part of a \$25-million "entrance fee" paid by the Doba consortium. While technically not a violation of the terms of the World Bank loan, the arms purchase embarrassed World Bank officials who had defended the Chadian government against attacks from human rights groups. The government of Chad has said that the money spent on arms will be paid back from next year's state budget.

The Chad-Cameroon project has revived interest in development of the Sedigi basin fields, whose two wells have a combined capacity of 5,000 bbl/d. The development plan for Sedigi, which was included in the MOU signed by the consortium and Chad, called for development of the fields, and a pipeline linking them to a proposed refinery located in N'Djamena. However, the Sedigi project was uncoupled from the Doba project following the reorganization of the Doba consortium in April 2000. The following month, Concorp International Limited, headed by Sudanese businessman Mohamed Abdallah Jar al Nabi, took control of the Sedigi project. The refinery, with planned capacity of 2,000 - 3,000 bbl/d, would produce fuel to cover local transportation needs and supply a new 16-MW power station in Ndjamena.

In February 1999, Chad signed an exploration agreement with three firms, U.S.-based Trinity Gas, Carlton Energy, and Nigeria's Oriental Energy Resources, for the 108-million acre (430,000 sq. km) Block H. The group plans to spend \$59 million on exploration activities on the block, which is roughly the size of Kansas and Oklahoma combined.

### **Downstream**

Chad's downstream oil sector currently is totally dependent on petroleum product imports from neighboring Nigeria and Cameroon. Local companies (35%) handle distribution and marketing of petroleum in Chad, followed by Shell (25%), Exxon Mobil (20%) and TotalFina Elf (20%). Nearly all commercial energy requirements, including power generation, are provided by petroleum. If undertaken, the Sedigi project will be able to supply nearly all of Chad's petroleum requirements, and reduce its reliance on imported petroleum.

### **ELECTRICITY & RENEWABLE ENERGY**

Only 2% of Chad's households have access to electricity. Chad currently has installed electric generation capacity of 29 megawatts (MW), all of which is petroleum-fired. Electricity production depends solely on the availability of imported petroleum products. The power supply crisis Chad experienced in 1998 was due to disruption in the supply of petroleum from Nigeria and Cameroon. Generation and distribution of electricity in Chad is handled by the Societe Tchadienne D'eau et D'electricite (STEE), the state-owned utility. Under terms of the IMF-sponsored structural adjustment plan, STEE is slated for privatization.

In June 1998, the World Bank approved a \$5.3-million loan for the establishment of a [Household Energy Project](#). The project is designed to provide affordable and sustainable supply of energy to Chadian households. Wood is the primary source of total energy in Chad, and the project hopes to establish a sustainable wood fuel and charcoal supply in nearly 100 villages located near N'Djamena.

*Sources for this report include: CIA World Factbook 2000; Economist Intelligence Unit ViewsWire; International Monetary Fund; Oil and Gas Journal; Petroleum Intelligence Weekly; U.S. Energy Information Administration; World Bank*

### **COUNTRY OVERVIEW**

**President:** Idriss Deby

**Prime Minister:** Nagoum Yamassoum

**Independence:** August 11, 1960 (from France)

**Population (July 2000E):** 8.4 million

**Location/Size:** Central Africa, between Libya (on the north); Sudan (on the east); Central African Republic and Cameroon (on the south); and Nigeria, and Niger (on the west) / 1,284,000 square kilometers (495,000 square miles), slightly smaller than the combined size of California, Nevada, Arizona and New Mexico.

**Major Cities:** N'Djamena (capital), Sarh, Moundou, Abeche

**Languages:** French (official), Arabic (official), Sara, and various other Nilo-Saharan, Congo-Kordofanian and Afro-Asiatic languages (between 100-200)

**Major Ethnic Groups:** Muslim (located in central and northern Chad): Arab, Fulbe, Kotoko, Hausa, Kanembou, Bagirmi, Boulala, Zaghawa, Hadjerai, Maba; non-Muslim (located in southern Chad): Sara, Ngambaye, Mbaye, Goulaye, Moudang, Moussei, Massa.

**Religion:** Muslim 50%, Christian 25%, traditional beliefs 25%,



**ECONOMIC OVERVIEW****Minister of Finance:** Mahamat Louani**Currency:** Communauté Financière Africaine (CFA) franc**Market Exchange Rate (4/03/01):** US\$1 = 745 CFA**Real Gross Domestic Product (GDP) (2000E):** \$1.36 billion**Real GDP Growth Rate (1999E):** -0.7% **(2000E):** 3.0%**Inflation Rate (1999E):** -8.4% **(2000E):** 3.0%**Current Account Balance (2000E):** -\$70 million**Major Trading Partners:** France, Cameroon, Nigeria, Portugal, Germany, South Africa**Merchandise Exports (1999E):** \$288 million**Merchandise Imports (1999E):** \$359 million**Merchandise Trade Balance (1999E):** -\$71 million**Major Export Products:** Cotton, livestock/meat, textiles, fish**Major Import Products:** Food, petroleum products, machinery, industrial goods**Total External Debt (1999E):** \$1.03 billion**ENERGY OVERVIEW****Minister of Mines, Energy, and Petroleum:** Moukhtar Moussa**Recoverable Oil Reserves (1999E):** 1 billion barrels**Oil Production (2000E):** None**Oil Consumption (1999E):** 1,200 barrels per day**Natural Gas Production (1999E):** None**Natural Gas Consumption (1999E):** None**Electric Generating Capacity (1/1/99):** 0.029 million kilowatts**Electricity Generation (1999E):** 0.09 billion kilowatthours**ENVIRONMENTAL OVERVIEW****Minister of Environment & Water:** Oumar Boukar Kadjallami**Total Energy Consumption (1999E):** 0.003 quadrillion Btu (0.1% of world total energy consumption)**Energy-Related Carbon Emissions (1999E):** 0.05 million metric tons of carbon (<0.1% of world carbon emissions)**Per Capita Energy Consumption (1999E):** 0.34 million Btu (vs. U.S. value of 355.8 million Btu)**Per Capita Carbon Emissions (1999E):** 0.006 metric tons of carbon (vs. U.S. value of 5.5 metric tons of carbon)**Fuel Share of Energy Consumption (1999E):** Oil (100.0%), Natural Gas (0.0%), Coal (0.0%)**Fuel Share of Carbon Emissions (1999E):** Oil (100.0%), Natural Gas (0.0%), Coal (0.0%)**Number of People per Motor Vehicle (1998):** 125 (vs. U.S. value of 1.3)**Status in Climate Change Negotiations:** Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified June 7th, 1994). Not a signatory to the Kyoto Protocol.**Major Environmental Issues:** Inadequate supplies of potable water; improper waste disposal in rural areas contributes to soil and water pollution; desertification.**Major International Environmental Agreements:** A party to Conventions on Biodiversity, Climate Change, Desertification, Endangered Species, Nuclear Test Ban, Ozone Layer Protection and Wetlands. Has signed, but not ratified: Law of the Sea and Marine Dumping.

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar and wind electric power.

**OIL AND GAS INDUSTRIES****Major Oil Fields:** Doba Basin (Bolobo, Kome, Miandoun), Lake Chad Basin (Kanem, Kumia, Sedigi)**Major Foreign Oil Company Involvement:** Chevron, Exxon Mobil, Petronas**Links**

For more information on Chad, see these other sources on the EIA web site:

[EIA - Country Information on Chad](#)

Links to other sites:

[CIA World Factbook - Chad](#)

[U.S. State Department: Human Rights Report: Chad](#)

[U.S. State Department's Consular Information Sheet - Chad](#)

[Country Commercial Guide Chad 1999](#)

[Library of Congress Country Studies: Chad](#)

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[Exxon Mobil: Chad/Cameroon Pipeline Project](#)

[World Bank Chad-Cameroon Project](#)

[World Bank Country Brief: Chad](#)

[International Monetary Fund \(IMF\): Chad](#)

[MBendi Country Profile: Chad](#)

[Africa New Service](#)

[Washington Post World Reference: Chad](#)

[University of Pennsylvania African Studies: Chad](#)

[African Development Bank: Chad](#)

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